

**Amendment and Response**

Applicant: John Greeven et al.

Serial No.: 09/823,188

Filed: March 29, 2001

Docket No.: 10004662-1 (H301.419.101)

Title: METHOD AND APPARATUS FOR DELIVERING AND REFILLING PHARMACEUTICALS

**IN THE CLAIMS**

Please amend claims 22-24, 27-39, 49, 51, 53, and 57-58 as follows:

- D1
1. (Withdrawn) A method of dispensing a pharmaceutical comprising the steps of:
    - dispensing said pharmaceutical from an intelligent drug dispensing appliance having:
      - a pharmaceutical reservoir and a data network interface;
      - detecting an impending depletion of the pharmaceutical in the reservoir; and,
      - soliciting a pharmaceutical refill by way of a data message sent via a data network to which said dispensing appliance is coupled via said data network interface.
  2. (Withdrawn) The method of claim 1 wherein said step of soliciting a pharmaceutical refill by way of a data message, is further comprised of the step of: soliciting a pharmaceutical refill by way of a secure data message sent via a data network to which said dispensing appliance is coupled.
  3. (Withdrawn) The method of claim 1 wherein said step of soliciting a pharmaceutical refill by way of a data message order includes the steps of:
    - sending a data message over a data network, from said intelligent drug dispensing appliance to at least one of:
      - a health care service provider;
      - a pharmaceutical provider;
      - an insurance provider;
    - said data message from said intelligent drug dispensing appliance indentifying at least one of: the patient for whom said pharmaceutical medication is required; pharmaceutical cost; the identity of the particular pharmaceutical; the pharmaceutical provider.
  4. (Withdrawn) The method of claim 1 including the step of sending a data message to said health care service provider so as to effect payment for the provision of health care service.

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5. (Withdrawn) The method of claim 1 including the step of sending a data message to a pharmaceutical provider to effect payment for the provision of pharmaceutical.
6. (Withdrawn) The method of claim 1 wherein said data message includes a first data message sent to a health care service provider and a second data message sent to a pharmaceutical provider.
7. (Withdrawn) The method of claim 3 wherein said step of sending a data message order to an insurance provider includes the additional step of the insurance provider authorizing payment for the pharmaceutical refill.
8. (Withdrawn) The method of claim 4 and claim 7 wherein said prescription data message is a secure data message.
9. (Withdrawn) The method of claim 4 wherein said prescription data message is a web hosted communication.
10. (Withdrawn) A method of electronically dispensing pharmaceuticals comprising the steps of:
- transmitting via a data network from a medical service provider, to at least one of:
  - a patient's intelligent drug dispensing appliance and a pharmaceutical provider,
  - a prescription data message for a pharmaceutical to be dispensed to said patient according to a regimen specified by said medical service provider in said secure prescription data message.
11. (Withdrawn) The method of claim 10 further including the step of validating said prescription data message.
12. (Withdrawn) The method of claim 10 wherein said prescription data message is an addressed data packet communication.

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13. (Withdrawn) A method of electronically dispensing pharmaceuticals comprising the steps of:

transmitting from a medical service provider's computer to at least one pharmaceutical provider's computer via a data network, a secure prescription data message for a pharmaceutical to be dispensed to a patient, said secure prescription data message including dosage instructions.

14. (Withdrawn) The method of claim 13 further including the step of sending a data message via a data network from said pharmaceutical provider's computer to a patient's intelligent drug dispensing appliance so as to direct said appliance to administer said pharmaceutical according to instructions of said medical service provider.

15. (Withdrawn) The method of claim 13 further including the step of validating said secure prescription data message.

16. (Withdrawn) A method of electronically dispensing pharmaceutical medications comprising the steps of:

transmitting from a medical service provider's computer to a patient's intelligent drug delivery appliance via a data network, a secure electronic prescription data message for a pharmaceutical to be dispensed to a patient, said secure prescription data message including dosage instructions; and

transmitting via data network, said secure prescription data message from said patient's intelligent drug delivery appliance to a pharmaceutical provider.

17. (Withdrawn) A method of electronically dispensing pharmaceuticals comprising the steps of:

transmitting from a patient's computer to at least one pharmaceutical provider's computer via a data network, a secure electronic prescription data message for a pharmaceutical to be dispensed to said patient.

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18. (Withdrawn) The method of claim 17 wherein said step of transmitting from a patient's computer includes the step of transmitting said secure electronic prescription data message from a patient's intelligent drug delivery appliance.

19. (Withdrawn) The method of claim 17 further including the step of validating said secure electronic prescription data message.

20. (Withdrawn) The method of claim 17 further including the steps of:

receiving at said patient's computer from the at least one pharmaceutical provider, a data message that comprises, terms upon which said pharmaceutical provider offers to supply said pharmaceutical to said patient.

21. (Withdrawn) The method of claim 17 further including the step of sending a data message from said patient's computer to said at least one pharmaceutical provider's computer to effect payment for said pharmaceutical.

22. (Currently Amended) An intelligent drug dispensing appliance comprising:

a controller;

a reservoir configured to contain a plurality of individual unit doses of an unpackaged pharmaceutical specific to an individual patient and to be dispensed over time to the individual patient, the unpackaged pharmaceutical including at least one of individual tablets, liquids, or gasses, to be administered to ~~an~~ the individual patient ~~in~~ as individual unit doses for direct use by the individual patient according to a treatment regimen;

a drug delivery mechanism ~~located proximate to the patient at a location remote to a hospital,~~ coupled to, and responsive to the controller and to the reservoir, to controllably dispense the unpackaged pharmaceutical directly from the reservoir to the individual patient ~~from the reservoir~~ in a precise amount corresponding to the individual unit dose in response to signals from said controller; and

a data network interface coupled to said controller;

wherein the intelligent drug dispensing appliance is sized and shaped for non-hospital placement proximate to the individual patient.

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23. (Currently Amended) The intelligent drug dispensing appliance of claim 22 including a data network interface that is capable of sending a data message over a data network through ~~said~~ the data network interface to at least one of:

a health care service provider;

a pharmaceutical supplier;

~~said~~ the data message from ~~said~~ the intelligent drug dispensing appliance identifying the patient for whom ~~said~~ the unpackaged pharmaceutical is required and the identity of the particular medication.

24. (Currently Amended) The intelligent drug dispensing appliance of claim 22 including a data network interface that is capable of receiving a data message over a data network through ~~said~~ the data network interface from at least one of:

a health care service provider;

a pharmaceutical supplier;

~~said~~ the data message to said intelligent drug dispensing appliance identifying the patient for whom said pharmaceutical is required and the identity of the particular medication.

25. (Original) The intelligent drug dispensing appliance of claim 22 further including a human/display interface.

26. (Original) The intelligent drug dispensing appliance of claims 23 and 24 wherein said data network interface is capable of sending a data message to effect payment for the provision of health care service.

27. (Currently Amended) The intelligent drug dispensing appliance of claims 23 and 24 wherein ~~said~~ the data network interface is capable of sending a data message to effect payment for the provision of a pharmaceutical.

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28. (Currently Amended) The intelligent drug dispensing appliance of claims 23 and 24 wherein ~~said the~~ the data network interface is capable of sending a data message transported via the Internet.

29. (Currently Amended) The intelligent drug dispensing appliance of claims 23 and 24 where ~~said the~~ the data network interface is capable of sending a data message transported via a wireless communication device.

30. (Currently Amended) The intelligent drug dispensing appliance of claim 22 further including a pharmaceutical level detector in communication with the controller and the reservoir, the pharmaceutical level detector configured to ascertain at least one of a measured weight of the unpackaged pharmaceutical remaining in the reservoir, a decremented amount of the unpackaged pharmaceutical remaining in the reservoir, a depth measurement of the unpackaged pharmaceutical in the reservoir, and a static pressure within the reservoir.

31. (Currently Amended) An intelligent drug dispensing system providing replenishment of pharmaceutical medication, ~~said the~~ the system comprising:

an intelligent drug dispensing appliance, the appliance including a data network interface through which pharmaceutical replenishment request signals can be sent from ~~said the~~ the intelligent drug dispensing appliance, a controller and a reservoir configured to contain a plurality of individual unit doses of unpackaged pharmaceutical to be dispensed directly to an individual patient, the unpackaged pharmaceutical including at least one of individual tablets, liquids, and gasses, to be administered in-as individual unit doses according to a treatment regimen for direct use by the patient, wherein the reservoir of pharmaceutical intelligent drug dispensing appliance is sized and shaped for placement located proximate to the individual patient at a non-hospital location; and

a pharmaceutical replenishment request data server ~~coupled in communication with to~~ said the data network interface to receive medication replenishment request signals from at least one intelligent drug dispensing appliance.

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32. (Currently Amended) An intelligent drug dispensing system providing replenishment of pharmaceutical medication, ~~said the~~ system comprising:

an intelligent drug dispensing appliance, including a data network interface through which pharmaceutical replenishment request signals can be received, a controller and a reservoir configured to contain a plurality of individual unit doses of unpackaged pharmaceutical to be dispensed directly to an individual patient, the unpackaged pharmaceutical including at least one of individual tablets, liquids, and gasses, to be administered in precise unit as individual unit doses according to a treatment regimen for direct use by the patient, wherein the reservoir of pharmaceutical intelligent drug dispensing appliance is sized and shaped for placement located proximate to the patient at a non-hospital location; and

a pharmaceutical replenishment request data server ~~coupled to~~ in communication with said the data network interface to send medication replenishment request signals to at least one intelligent drug dispensing appliance.

33. (Currently Amended) The intelligent drug dispensing system of claims 31 and 32 wherein ~~said the~~ pharmaceutical replenishment request data server is comprised of a health care service provider computer, responsive to data messages from a patient of ~~said the~~ health care service provider to generate drug refill orders.

34. (Currently Amended) The intelligent drug dispensing system of claim 31 and 32 wherein ~~said the~~ pharmaceutical replenishment request data server is comprised of a drug supplier computer, responsive to data messages from either a patient or a health care service provider so as to effect shipment of medication to ~~said the~~ patient.

35. (Currently Amended) The intelligent drug dispensing system of claim 31 and 32 wherein ~~said the~~ pharmaceutical replenishment request data server is comprised of a insurance provider computer, responsive to data messages from either a patient or a health care service provider so as to approve payment for said medication.

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36. (Currently Amended) An intelligent drug dispensing system providing automatic replenishment of pharmaceuticals, ~~said the~~ system comprising:

n1 a pharmaceutical replenishment request data server operatively coupled to a data network so as to receive pharmaceutical replenishment request messages from at least one intelligent drug dispensing appliance;

wherein the at least one intelligent drug dispensing apparatus includes a controller and a reservoir of a plurality of individual unit doses of unpackaged pharmaceutical to be dispensed over time directly to an individual patient in a plurality of discrete individual unit doses according to a treatment regimen for direct use by the patient, wherein the ~~reservoir at~~ least one intelligent drug dispensing apparatus is sized and shaped for placement located proximate to the patient at a non-hospital location.

37. (Currently Amended) The intelligent drug dispensing system of claim 36 wherein ~~said the~~ pharmaceutical replenishment request data server is comprised of a health care service provider computer, responsive to data messages sent from a patient of ~~said the~~ health care service provider to generate drug refill orders.

38. (Currently Amended) The intelligent drug dispensing system of claim 36 wherein ~~said the~~ pharmaceutical replenishment request data server is comprised of a pharmaceutical provider computer, responsive to data messages sent from a health care service provider to generate drug refill orders.

39. (Currently Amended) The intelligent drug dispensing system of claim 36 wherein ~~said the~~ pharmaceutical replenishment request data server is comprised of an insurance carrier computer, responsive to data messages sent from a health care service provider to generate drug refill orders for a patient.

40. (Withdrawn) A method of dispensing a pharmaceutical comprising the steps of:  
receiving a request for a pharmaceutical in the form of a first data message received via a data network;



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upon the receipt of said data message requesting a pharmaceutical, receiving an approval message via a second message;

upon receipt of the approval message, filling said request for said pharmaceutical.

41. (Withdrawn) The method of claim 40 further including the step of: sending a data message to a drug delivery appliance via the data network so as to dispense said pharmaceutical.

42. (Withdrawn) The method of claim 40 wherein said receiving a request includes the step of sending a data message from a drug dispensing appliance.

43. (Withdrawn) The method of claim 40 wherein said step of receiving a request includes the step of sending a data message from a health care service provider's computer.

44. (Withdrawn) The method of claim 40 wherein the step of approving said order is performed by a health care service provider.

45. (Withdrawn) The method of claim 40 wherein the step of receiving an order is performed by a pharmaceutical supplier.

46. (Withdrawn) The method of claim 40 wherein the request is a message received by multiple pharmaceutical suppliers.

47. (Withdrawn) The method of claim 40 wherein the request is a message received by multiple pharmaceutical suppliers and fewer than all is selected.

48. (Currently Amended) The intelligent drug dispensing appliance of claim 22 wherein the unpackaged pharmaceutical is at least one liquid material.

49. (Currently Amended) The intelligent drug dispensing appliance of claim 48 wherein the drug delivery mechanism includes an ink-jet print head ~~capable of~~ configured to delivering

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directly dispense the individual unit doses of precise amounts of the liquid from the reservoir to the individual patient.

50. (Previously presented) The intelligent drug dispensing appliance of claim 49 wherein the controller includes a memory device contained within the appliance.

51. (Currently Amended) The intelligent drug dispensing appliance of claim 50 wherein the memory device contains at least one treatment regimen regulating dispensing of the individual unit doses of the unpackaged pharmaceutical to the individual patient.

52. (Previously presented) The intelligent drug dispensing apparatus of claim 51 wherein the data network interface is adapted to be removably coupled to the patient monitoring sensors.

53. (Currently Amended) An intelligent drug dispensing appliance comprising:

a controller;

a reservoir configured to contain a supply of unpackaged pharmaceutical specific to the individual patient to be dispensed over time, the supply including a grouped plurality of individual unit doses;

~~a drug dispensing mechanism, located proximate to the patient at a location remote to a hospital, the drug delivery mechanism~~ coupled to, and responsive to, the controller and to the reservoir to dispense the unpackaged pharmaceutical directly to the individual patient from the reservoir in a precise amount of the individual unit doses in response to signals from said controller;

a data network interface coupled to said controller; and

a pharmaceutical depletion guard, the pharmaceutical depletion guard including a pharmaceutical level detector coupled to the controller and the data network interface, the data network interface is capable of sending a message to at least one of a health care provider or pharmaceutical supplier, the data message from the data network interface including at least one of a value of a measured amount of unpackaged pharmaceutical in the reservoir, a patient identity, a pharmaceutical identity, and a treatment regimen.

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wherein the intelligent drug dispensing appliance is sized and shaped for placement proximate to the individual patient remote from a hospital location.

spelling (proximate)

54. (Previously presented) The intelligent drug dispensing appliance of claim 53 wherein the pharmaceutical includes at least one of individual tablets, liquids, or gasses.

55. (Previously presented) The intelligent drug dispensing appliance of claim 53 further including a human/display interface, the human/display interface including at least one of a tactile input device or a speech recognition device operatively coupled to the controller.

56. (Previously presented) The intelligent drug dispensing appliance of claim 53 further including at least one sensor operatively coupled to the controller, the sensor capable of providing data signals indicative of the patient's physical condition.

57. (Currently Amended) The intelligent drug dispensing appliance of claims 53-31 and 32 further comprising:

a pharmaceutical depletion guard, the pharmaceutical depletion guard including a pharmaceutical level detector coupled to the ~~processor-controller~~ and the data network interface, wherein the data network interface is capable of sending a message to at least one of a health care provider or pharmaceutical supplier, the data message from the data network interface including at least one of a patient identity, a pharmaceutical identity, and a treatment regimen.

58. (Currently Amended) The intelligent drug dispensing appliance of claim 57-53 wherein the data network interface is capable of sending a data message to effect payment for a service, the service including at least one of the provision of health care and the provision of a pharmaceutical.